

CUSTOMER NO.: 24498**Serial No. 10/099,710**

Reply to Final Office Action dated: 06/26/08

Response dated: 09/24/08

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setting the display indicators of subsequent repeated pictures of the picture being repeated to the predetermined value." (emphasis added).

In the invention of the Applicant, at least with respect to claim 1, in response to a trick mode command, a picture in the original video signal is repeated to form a trick mode video signal. The display indicator of the picture being repeated is set to a predetermined value to determine the display order of the picture being repeated among all pictures to be displayed and the display indicators of subsequent repeated pictures of the picture being repeated are set to the predetermined value to reflect their intended display order, which is the same as the first picture being repeated. In support of at least claim 1, the Applicant in the Specification specifically recites:

"At step 214, the display indicator of the picture to be repeated can be set to a predetermined value. At step 216, the display indicators of subsequent repeated pictures of the picture being repeated can also be set to this predetermined value. As such, the value of the display indicator for each of the pictures to be displayed during the trick mode can be the same. The display indicator can be a temporal reference field. A temporal reference field is typically a ten bit field located in the picture header of digitally encoded pictures. This field normally has an integer value, and some decoders rely on this value to determine when a picture is to be displayed." (See Specification, page 9, lines 11-18). (emphasis added).

And

"Specifically, as picture B₆ is repeated, the value of the temporal reference fields of each of the subsequent repeated pictures is set to reflect their intended display order. Thus, the value of the temporal reference fields of subsequent repeated pictures of picture B₆ are typically incrementally increased during the freeze trick mode. As noted earlier, however, the integer value of the temporal reference field of reference picture P₆ will remain the same, and once the freeze trick mode is stopped, picture P₆ may be displayed out of order as the decoder, particularly if it is remotely located, is unaware that a trick mode has been initiated.

In accordance with the inventive arrangements, however, the integer value of picture B₆ can be set to 6, and the integer values of the temporal reference fields of subsequent repeated pictures of picture B₆ can also be set to a value of 6." (See Specification, page 11, lines 2-13).

The Applicant submits that it is very clear from at least the portions of the Applicant's Specification presented above that in the invention of the Applicant as claimed, the display indicator of a first picture to be repeated is set to a

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predetermined value to indicate a display order of the picture to be repeated. For example, if the picture to be repeated is the sixth picture in a group of pictures having, for example, twenty pictures, then the display order of the picture to be repeated is set to six to indicate that the picture to be repeated is the sixth picture displayed. The Applicant further teaches that the display order of the subsequent repeats of the picture can also be set to the same number (e.g., six) to ensure that the subsequent repeats of the picture that was repeated are displayed at the time that the first repeat of the repeated picture because the display order of the subsequent repeats is also six.

As such, the Applicant submits that the Examiner misunderstands the Applicant's invention and as such is improperly rejecting the Applicant's claims.

That is, the Applicant submits the following:

"Anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim" (Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co., 730 F.2d 1452, 221 USPQ 481, 485 (Fed. Cir. 1983)). (emphasis added). The Applicant respectfully submits that Duruoaz absolutely fails to teach each and every element of at least the Applicant's claim 1, which specifically recites:

"A method of performing a trick mode on a video signal, comprising the steps of:

receiving a trick mode command;

in response to the trick mode command, repeating a picture in the video signal to form a trick mode video signal, wherein the picture contains a display indicator;

setting the display indicator of the picture being repeated to a predetermined value; and

setting the display indicators of subsequent repeated pictures of the picture being repeated to the predetermined value." (emphasis added).

The Applicant respectfully submits that Duruoaz absolutely fails to teach, suggest, disclose or anticipate each and every element of the claimed invention, arranged as in at least the Applicant's independent claim 1. More specifically, the Applicant respectfully submits that there is absolutely no teaching, suggestion or disclosure in Duruoaz for a method, and systems for performing a trick mode on a video signal including at least "setting the display indicator of the picture being

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repeated to a predetermined value" and "setting the display indicators of subsequent repeated pictures of the picture being repeated to the predetermined value" as taught in the Applicant's Specification and claimed by at least the Applicant's claim 1.

In contrast to the invention of the Applicant, Duruoaz teaches a Command Manager. As characterized by the Examiner, Duruoaz, teaches that a picture contains a display indicator and that a slow forward trick play is achieved by decrementing a counter for the repetitions of a frame to display between forward steps. That is, the Examiner concedes that Duruoaz teaches where the number of times a frame is displayed is disclosed to be the reciprocal of the slow speed ratio and that as such the indicator is therefore clearly and explicitly set by the slow speed ratio. As such, the Applicant submits that Duruoaz absolutely fails to teach or suggest a method, and systems for performing a trick mode on a video signal including at least "setting the display indicator of the picture being repeated to a predetermined value" and "setting the display indicators of subsequent repeated pictures of the picture being repeated to the predetermined value" as taught in the Applicant's Specification and claimed by at least the Applicant's claim 1, because as conceded by the Examiner, Duruoaz instead teaches that a display indicator of a picture being repeated is the number of times a frame is repeated in a slow tick play mode and not that a display indicator of a picture being repeated represents an intended display order of a picture being repeated as taught and claimed by the Applicant.

The Examiner again cites Col. 6, lines 56-58 of Duruoaz for attempting to teach the technical feature of "setting the display indicator of the picture being repeated to a predetermined value" of the Applicant's claim 1. The Applicant disagrees. Duruoaz, at Col. 6, lines 56-58, specifically recites:

"(4) "Slow Forward" which plays at an adjustable slow speed, which defaults to 1/10, i.e. each frame is repeatedly displayed ten times;". (See Duruoaz, Col. 6, lines 56-58).

As clear above, in Col. 6 of Duruoaz, Duruoaz teaches that the number of times a frame is displayed is disclosed to be the reciprocal of the slow speed ratio and that

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as such the indicator is therefore clearly and explicitly set by the slow speed ratio as conceded by the Examiner.

However, the Applicant respectfully submits that there is absolutely no teaching, suggestion or disclosure in Duruoze for the technical feature of "setting the display indicator of the picture being repeated to a predetermined value" of the Applicant's claim 1. That is, the Applicant submits that Duruoze absolutely fails to anticipate a method and systems for performing a trick mode on a video signal including at least setting the display indicator of the picture being repeated to a predetermined value to reflect the intended display order of the repeated picture, in for example a GOP.

The Applicant further submits that Duruoze absolutely fails to anticipate "setting the display indicators of subsequent repeated pictures of the picture being repeated to the predetermined value" as taught in the Applicant's Specification and claimed by at least the Applicant's claim 1. The Examiner cites Fig. 13D step 367 of Duruoze for attempting to teach the technical feature of "setting the display indicators of subsequent repeated pictures of the picture being repeated to the predetermined value" of the Applicant's claim 1. The Applicant disagrees. With reference to Fig. 13D and step 367, Duruoze specifically recites:

"When the SLF state is initially entered, a single frame is decoded, and then is repeatedly displayed for the number of times identified by the repeat value. Accordingly, after step 362, in step 364 the trick play state machine enters the sub-state SLF-PLAY, during which a new frame is decoded. Subsequently, in step 366, a flag is set to indicate that processing of the SLF state is in the midst of decoding a frame. This flag is used in this and other state transition handlers to ensure that frame decoding is completed prior to a state transition. Then, processing proceeds to step 367, in which a repeat counter is initialized with the repeat value from the SLF command that was stored in step 362. The repeat counter is later used to determine the number of times that the current frame should be displayed." (See Duruoze, col. 15, lines 25-38).

As clear above, Fig. 13D and step 367 of Duruoze teaches that the display indicators of subsequent pictures are also set to the same number as the first picture such that the subsequent pictures are repeated the same number of times as conceded by the Examiner.

As such, the Applicant submits that Duruoze fails to teach each and every element of the Applicant's claimed invention, arranged as in at least the Applicant's

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independent claims and specifically claim 1 as required for anticipation. Therefore, the Applicant submits that for at least the reasons recited above, the Applicant's claim 1 is not anticipated by the teachings of Duruo, and, as such, claim 1 fully satisfies the requirements of 35 U.S.C. § 102 and is patentable thereunder.

Likewise, the Applicant's independent claims 9, 11 and 19 recite similar relevant features as recited in the Applicant's claim 1. As such and for at least the reasons recited above, the Applicant submits that independent claims 9, 11 and 19 are also not anticipated by the teachings of Duruo, and, as such, fully satisfy the requirements of 35 U.S.C. § 102 and are patentable thereunder.

Furthermore, the Applicant's dependent claims 2, 5, 8, 10, 12, 15, 18 and 20 depend either directly or indirectly from the Applicant's independent claims 1, 9, 11 and 19 and recite additional features thereof. As such, the Applicant submits that at least because the Applicant's claims 1, 9, 11 and 19 are not anticipated by the teachings of Duruo, the Applicant further submits that the Applicant's dependent claims 2, 5, 8, 10, 12, 15, 18 and 20, which depend either directly or indirectly from the Applicant's claims 1, 9, 11 and 19, are also not anticipated by the teachings of Duruo, and, as such, fully satisfy the requirements of 35 U.S.C. § 102 and are patentable thereunder.

The Applicant reserves the right to establish the patentability of each of the claims individually in subsequent prosecution.

B. 35 U.S.C. § 103

The Examiner rejected the Applicant's claims 5 and 15 under 35 U.S.C. § 103(a) as being unpatentable over Duruo as applied to claims 1 and 11 above. The rejection is respectfully traversed.

The Examiner applied Duruo for the rejection of the Applicant's claims 5 and 15 as applied above for the rejections of the Applicant's independent claims 1 and 11. As recited above and for at least the reasons recited above and specifically that Duruo fails to teach, suggest or anticipate "setting the display indicator of the picture being repeated to a predetermined value" and "setting the display indicators of subsequent repeated pictures of the picture being repeated to the predetermined value" as taught in the Applicant's Specification and claimed by at least the Applicant's claim 1 and claim 11, the Applicant respectfully submits that

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Duruo absolutely fails to teach, suggest or anticipate at least the Applicant's claims 1 and 11. As such, the Applicant further submits that Duruo also fails to teach, suggest or anticipate the Applicant's claims 5 and 15, which depend directly from the Applicant's claims 1 and 11, respectively.

Therefore, the Applicant submits that for at least the reasons recited above, the Applicant's claims 5 and 15 are not rendered obvious by the teachings of Duruo and, as such, claims 5 and 15 fully satisfy the requirements of 35 U.S.C. § 103 and are patentable thereunder.

The Applicant reserves the right to establish the patentability of each of the claims individually in subsequent prosecution.

C. 35 U.S.C. § 103

The Examiner rejected the Applicant's claims 3 and 13 under 35 U.S.C. § 103(a) as being unpatentable over Duruo as applied to the claims above, and further in view of Metz et al. (US. Patent No. 5,978,855, hereinafter "Metz"). The rejection is respectfully traversed.

The Examiner applied Duruo for the rejection of the Applicant's claims 3 and 13 as applied above for the rejections of the Applicant's independent claims 1 and 11. As recited above and for at least the reasons recited above and specifically that Duruo fails to teach, suggest or anticipate "setting the display indicator of the picture being repeated to a predetermined value" and "setting the display indicators of subsequent repeated pictures of the picture being repeated to the predetermined value" as taught in the Applicant's Specification and claimed by at least the Applicant's claim 1 and claim 11, the Applicant respectfully submits that Duruo absolutely fails to teach, suggest or anticipate at least the Applicant's claims 1 and 11. As such, the Applicant further submits that Duruo also fails to teach, suggest or anticipate the Applicant's claims 3 and 13, which depend directly from the Applicant's claims 1 and 11, respectively.

Furthermore, the Applicant respectfully submits that the teachings of Metz absolutely fail to bridge the substantial gap between the teachings of Duruo and the invention of the Applicant. More specifically, Metz teaches the downloading of applications software through a broadcast channel. In Metz, application software is downloaded and audio/video information is transmitted through one channel of a

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digital broadcast network. The network of Metz also provides two-way, low-speed data communications capacity, e.g. for signaling and/or interactive text services. Metz, however, absolutely fails to teach, suggest or make obvious "setting the display indicator of the picture being repeated to a predetermined value" and "setting the display indicators of subsequent repeated pictures of the picture being repeated to the predetermined value" as taught in the Applicant's Specification and claimed by at least the Applicant's independent claims.

As such, the Applicant respectfully submits that Duruoaz and Metz, alone or in any allowable combination, fail to teach, suggest or make obvious a method and system for performing a trick mode on a video signal including "setting the display indicator of the picture being repeated to a predetermined value" and "setting the display indicators of subsequent repeated pictures of the picture being repeated to the predetermined value" as taught in the Applicant's Specification and claimed by at least the Applicant's claim 1 and claim 11. Therefore and for at least the reasons recited above, the Applicant respectfully submits that the teachings of Duruoaz and Metz, alone or in any allowable combination, fail to teach, suggest or make obvious the Applicant's claim 1 and claim 11 and as such, the Applicant's claims 3 and 13, which depend directly from the Applicant's claims 1 and 11 are also not rendered obvious.

Therefore, the Applicant submits that for at least the reasons recited above, the Applicant's claims 3 and 13 are not rendered obvious by the teachings of Duruoaz and Metz, alone or in any allowable combination, and, as such, claims 3 and 13 fully satisfies the requirements of 35 U.S.C. § 103 and are patentable thereunder.

The Applicant reserves the right to establish the patentability of each of the claims individually in subsequent prosecution.

D. 35 U.S.C. § 103

The Examiner rejected the Applicant's claims 6-7 and 16-17 under 35 U.S.C. § 103(a) as being unpatentable over Duruoaz as applied to the claims above, and further in view of McLaren (WO 96/13121). The rejection is respectfully traversed.

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The Examiner applied Duruoaz for the rejection of the Applicant's claims 6-7 and 16-17 as applied above for the rejections of the Applicant's independent claims 1 and 11. As recited above and for at least the reasons recited above and specifically that Duruoaz fails to teach, suggest or anticipate "setting the display indicator of the picture being repeated to a predetermined value" and "setting the display indicators of subsequent repeated pictures of the picture being repeated to the predetermined value" as taught in the Applicant's Specification and claimed by at least the Applicant's claim 1 and claim 11, the Applicant respectfully submits that Duruoaz absolutely fails to teach, suggest or anticipate at least the Applicant's claims 1 and 11. As such, the Applicant further submits that Duruoaz also fails to teach, suggest or anticipate the Applicant's claims 6-7 and 16-17, which depend either directly or indirectly from the Applicant's claims 1 and 11, respectively.

Furthermore, the Applicant respectfully submits that the teachings of McLaren absolutely fail to bridge the substantial gap between the teachings of Duruoaz and the invention of the Applicant. More specifically, the Applicant respectfully submits that there is absolutely no teaching, suggestion or disclosure in McLaren for a method, and systems for performing a trick mode on a video signal including at least "setting the display indicator of the picture being repeated to a predetermined value" and "setting the display indicators of subsequent repeated pictures of the picture being repeated to the predetermined value" as taught in the Applicant's Specification and claimed by at least the Applicant's claim 1.

In contrast to the invention of the Applicant, McLaren teaches a method and apparatus for generating an MPEG compatible digital image representative signal for recording which facilitates reproduction at more than one speed. In McLaren, a digital video cassette recorder ("DVCR") records MPEG video. The DVCR receives an MPEG video signal and generates trick play I frames from I frames located in the MPEG video signal. These trick play I frames are grouped together to form trick play video signals of varying speeds, which are then recorded onto a tape together with the originally received MPEG video signal to facilitate non-standard replay speed. In particular, additional I frame data streams are generated specifically for each predetermined replay speed and are written within recorded tracks. For example, recorded tracks can be provided for 5X, 18X and

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35X replay speeds. When a trick mode is initiated, one of the pre-recorded trick play video signals can be played back in place of the normal playback signal.

In contrast to McLaren, the Applicant's invention is directed at least in part to a method of performing a trick mode on a video signal including "setting the display indicator of the picture being repeated to a predetermined value" and "setting the display indicators of subsequent repeated pictures of the picture being repeated to the predetermined value".

As recited above, McLaren instead and in contrast to the invention of the Applicant, teaches that a pre-recorded trick play video signal can be played back in place of a normal playback signal during a trick play mode. That is, in McLaren trick play signals of various speeds are pre-recorded and a specific one of the pre-recorded signals are played to accomplish a requested trick play mode. However, in the invention of McLaren pictures in the video signal are not repeated to form a trick mode video signal and there is not teaching of "setting the display indicator of the picture being repeated to a predetermined value" and "setting the display indicators of subsequent repeated pictures of the picture being repeated to the predetermined value".

As such, the Applicant respectfully submits that Duruoaz and McLaren, alone or in any allowable combination, fail to teach, suggest or make obvious a method and system for performing a trick mode on a video signal including "setting the display indicator of the picture being repeated to a predetermined value" and "setting the display indicators of subsequent repeated pictures of the picture being repeated to the predetermined value" as taught in the Applicant's Specification and claimed by at least the Applicant's claim 1 and claim 11. Therefore and for at least the reasons recited above, the Applicant respectfully submits that the teachings of Duruoaz and McLaren, alone or in any allowable combination, fail to teach, suggest or make obvious the Applicant's claim 1 and claim 11.

Therefore, the Applicant submits that for at least the reasons recited above, the Applicant's claims 6-7 and 16-17 are not rendered obvious by the teachings of Duruoaz and McLaren, alone or in any allowable combination, and, as such, claims 6-7 and 16-17 fully satisfies the requirements of 35 U.S.C. § 103 and are patentable thereunder.

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The Applicant reserves the right to establish the patentability of each of the claims individually in subsequent prosecution.

Conclusion

Thus the Applicant respectfully submits that none of the claims, presently in the application, are anticipated under the provisions of 35 U.S.C. § 102 or rendered obvious under the provisions of 35 U.S.C. § 103. Consequently, the Applicant believes that all these claims are presently in condition for allowance. Accordingly, both reconsideration of this application and its swift passage to issue are earnestly solicited.

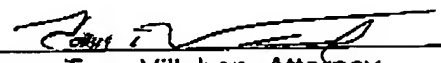
If however, the Examiner believes that there are any unresolved issues requiring adverse final action in any of the claims now pending in the application, or if the Examiner believes a telephone interview would expedite the prosecution of the subject application to completion, it is respectfully requested that the Examiner telephone the undersigned.

No fee is believed due. However, if a fee is due, please charge the additional fee to Deposit Account No. 07-0832.

Respectfully submitted,

Shu Lin

By:


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